



Iowa Leading Indicators Index August 2013 Report

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The Iowa Leading Indicators Index (ILII) increased to 106.9 (100=1999) in August 2013. The Iowa non-farm employment coincident index recorded a 0.08 percent rise in August, which extends the streak of employment gains to thirty-five consecutive months.

The ILII's value rose 0.4 percent in August for a fourth consecutive month of increases. During the six-month span through August, the ILII increased 0.9 percent (an annualized rate of 1.9 percent). The six-month diffusion index was 87.5 with only one of the eight components (agricultural futures profits index) experiencing an increase of less than 0.05 percent over the last half a year.

In August, seven of eight Iowa Leading Indicators Index components contributed positively. The positive contributors were diesel fuel consumption, average weekly manufacturing hours, the new orders index, the national yield spread, residential building permits, average weekly unemployment claims (inverted), and the Iowa stock market index. Only the agricultural futures profits index contributed to the index negatively.

Figure 1. Iowa Leading Indicators Index and Iowa Non-Farm Employment Coincident Index: January 1999-August 2013

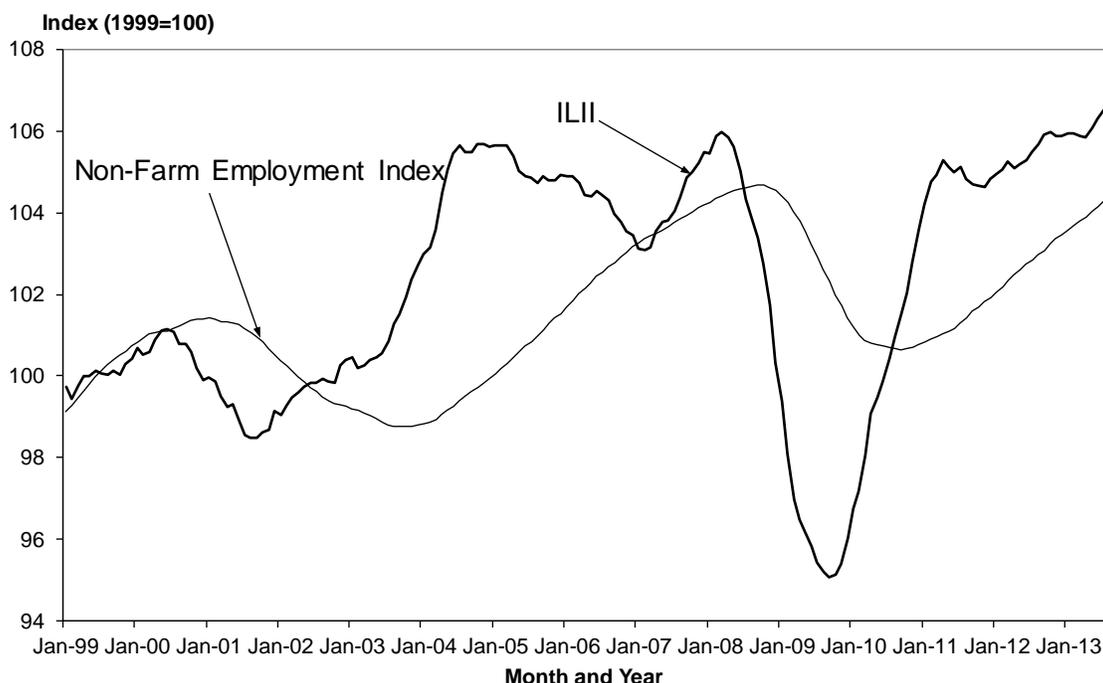


Table 1. Iowa Leading Indicators Index: Six Month Overview

Monthly Values	2013					
	March	April	May	June	July	August
ILII	105.9	105.9	106.1	106.3	106.6	106.9
Percentage Change ^a	0.0%	0.0%	0.2%	0.2%	0.2%	0.4%
Diffusion Index ^b	56.3	62.5	62.5	87.5	68.8	87.5
Six-Month Values	Sept to March	Oct to April	Nov to May	Dec to June	Jan to July	Feb to August
ILII						
Percentage Change	0.0%	-0.1%	0.2%	0.4%	0.6%	0.9%
Annualized Percentage Change	0.0%	-0.2%	0.3%	0.8%	1.1%	1.9%
Diffusion Index	62.5	56.3	62.5	75.0	87.5	87.5

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced September 27, 2013.

a. Percentage changes in the ILII do not always equal changes in the level of the ILII due to rounding.

b. A diffusion index measures the proportion of components that are rising based on the actual changes (not the standardized contributions to the ILII). Components experiencing increases greater than 0.05 percent are assigned a value of 1.0, components that experience changes less than an absolute value of 0.05 percent are assigned a value of 0.5, and components experiencing decreases greater than 0.05 percent are assigned a value of 0.0.

Table 2. Iowa Leading Indicators Index Components: Six Month Overview

Component Series Monthly Values ^a		2013					
		March	April	May	June	July	August
AFPI ^b	↓ ^c						
Corn Profits (cents per bushel)		271.2	263.6	259.7	264.9	249.4	227.0
Soybean Profits (cents per bushel)		517.1	495.1	480.7	485.3	467.8	443.6
Hog Profits (cents per pound)		15.2	14.6	14.6	14.5	14.7	15.9
Cattle Profits (cents per pound)		-13.9	-14.9	-15.9	-16.6	-17.0	-17.1
Iowa Stock Market Index (10=1984-86)	↑	82.02	82.64	86.62	86.76	89.93	90.19
Yield Spread (10-year less 3-month)	↑	1.87	1.70	1.89	2.25	2.54	2.70
Residential Building Permits	↑	824	840	837	830	855	862
Average Weekly Unemployment Claims ^d	↑	3,311	3,293	3,297	3,284	3,296	3,281
Average Weekly Manufacturing Hours	↑	40.66	40.65	40.69	40.72	40.79	40.94
New Orders Index (percent)	↑	64.5	65.3	65.7	66.1	66.7	67.7
Diesel Fuel Consumption (mil gallons)	↑	55.37	55.34	55.57	55.73	55.71	56.32

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced September 27, 2013.

a. For all component series except for the yield spread and the Iowa stock market index, the values represent 12-month backward moving averages.

b. The agricultural futures profits index is computed as the sum of the standardized symmetric percent changes in the four series, each weighted by the commodity's annual share of Iowa cash farm income (updated August 27, 2013).

c. Arrows indicate the direction of the series' contribution to the ILII for the latest month.

d. Changes in average weekly initial unemployment insurance claims are inverted when added to the ILII, thus a negative change in the series contributes positively to the index.

ILII Components

- **Diesel fuel consumption:** Number of taxable gallons of diesel fuel sold in Iowa. Changes are calculated based on a 12-month moving average. Diesel fuel consumption increased 13.4 percent between August 2012 and 2013, causing the 12-month moving average to rise to 56.32 million gallons from 55.71 in July, and contributing 0.20 to the ILII value.
- **Average weekly manufacturing hours:** Weekly average of hours worked in the manufacturing sector in Iowa. Changes are calculated based on a 12-month moving average. For August 2013, this component contributed 0.10 to the ILII value after increasing to 40.94 from 40.79 in August. August 2013 hours were 41.6, well above 39.8 hours in August 2012, and slightly above the historical average of 41.4 (1996-2008).
- **New orders index:** Diffusion index measuring the share of purchasing managers in Iowa reporting increases in orders received for manufacturing output. Changes are calculated based on a 12-month moving average. The monthly value of the index rose to 77.1 in August from 72.9 in July, and it was up from 65.0 a year ago. The 12-month moving average of the new orders index rose to 67.7, contributing 0.06 to the ILII.
- **Yield spread:** Difference between the yield on 10-year Treasury bonds and 3-month Treasury bills. During August, the yield spread increased to 2.70 percent as the long-term rate rose 16 basis points while the short-term rate held steady. For the month, the yield spread contributed 0.05 to the ILII.
- **Residential building permits:** Number of total permits issued in Iowa for the construction of residential housing units. Changes are calculated based on a 12-month moving average. For August, this component contributed 0.03 to the ILII with the 12-month moving average increasing to 862. August 2013 permits were 6.8 percent above the number issued in August 2012, and 6.3 percent above the historical average for August (1998-2008).
- **Average weekly unemployment claims:** Weekly average of initial claims for unemployment insurance in Iowa. Changes are calculated based on a 12-month moving average and are inverted when added to the ILII. This component contributed 0.01 to the ILII value. The 12-month moving average of claims fell to 3,281 with unemployment claims for the month 7.0 percent below August 2012 claims, but 3.20 percent above average historical claims for August (1987-2008).
- **Iowa stock market index:** Capitalization-weighted index of 33 Iowa-based or Iowa-concentrated publicly-traded companies. During August 2013, 17 of the 33 companies gained value, including 5 of the 11 financial-sector companies. The stock market index rose to 90.19, contributing 0.01 to the ILII value.
- **Agricultural futures profits index:** Composite measure of corn, soybean, hog, and cattle expected profits, measured as the futures price less estimated breakeven costs, weighted by the respective share of Iowa annual cash receipts. Changes are calculated based on a 12-month moving average. During August, this component contributed -0.11 to the ILII value. Expected profits fell for corn and soybeans with sharp drops in prices during the month; corn prices fell 41.9 percent and soybean prices fell 24.0 percent compared to last year. Expected profits increased moderately for hogs, but continued to fall for cattle even though hog prices rose 14.2 percent and cattle prices rose 2.1 percent over last year.

Table 3. ILII Components and Standardization Factors for FY 2014

Iowa Leading Indicator Index Components	Standardization Factor
Agricultural Futures Profits Index	0.048
Iowa Stock Market Index	0.018
Yield Spread	0.328
Residential Building Permits	0.035
Average Weekly Unemployment Claims	0.033
Average Weekly Manufacturing Hours	0.286
New Orders Index	0.063
Diesel Fuel Consumption	0.189

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced August 28, 2013
The standardization factors are the inverse of the standard deviation of the month-to-month changes in each component over the January 1999 to June 2013 period. These factors equalize the volatility of the contribution from each component and are normalized to one. The month-to-month changes are based on 12-month backward moving averages for all components except the yield spread and the Iowa stock market index. The yield spread and new orders index changes are simple arithmetic changes; month-to-month changes for the rest of the components are computed as symmetric percentage changes. The factors are updated annually during August.

Comments

The Iowa Leading Indicators Index (ILII) is designed to forecast the future direction of economic activity in the state of Iowa. The techniques used to build the ILII follow those used by The Conference Board to construct the national Leading Economics Index (LEI) prior to the 2001 revisions. A one-month movement in such an index does not produce a clear signal, rather it is necessary to consider the direction of the index over several consecutive months. A contraction signal in the ILII is considered reliable when two conditions are met: 1. The index declines by at least two percent over a six month period (using an annualized rate); and, 2. A majority of the individual components decline over those six months (the six-month diffusion index less than 50.0).

The Iowa non-farm employment coincident index measures the change in non-seasonally adjusted, total non-farm employment in the state of Iowa. Changes are based on a 12-month moving average of employment and are computed as symmetric percentage changes. The index is a representation of overall economic activity in Iowa.

The employment index and the ILII are constructed to have a value of 100 in the year 1999.

Contact: Questions can be addressed to Victoria Daniels of the Iowa Department of Revenue at (515) 281-8450 or Victoria.Daniels@iowa.gov.